

Cottonwood Hills

Gas Recovery Flare Log

Date	Time	Amb. Temp	Barometric Pressure	Total Flow	%CH ₄	%O ₂	%Balance	%CO ₂	Inlet Vac.	Gas Temp	Flame Temp.	Blower Amps	Flame Arrestor Inlet	Flame Arrestor Outlet	Flame Arrestor P.P. Blower	Total SCFM	Comments
7-18-12	200P	102	30.1	993	48.1	1.0	12.5	37.4	139	150	1455	30.8	-39.4				
7-24-12	1030	86	30.2	838	51.4	1.4	10.5	37.8	12.6	144	1402	27.8	-39.4			3330.2	936701 (2000P)
7-30-12	1240	82	30.1	834	51.4	1.2	9.8	38.7	12.6	140	1376	27.8	-40.0			3670.2	943797
8-7-12	1250	84	30.3	835	51.3	1.3	10.3	38.2	12.9	146	1418	28.1	-40.1			3817.2	951064
8-16-12	850	76	30.1	810	51.0	1.3	9.6	39.2	12.6	138	1426	27.6	-39.9			4009.2	960483
8-21-12	230P	84	30.2	813	50.9	1.4	8.4	40.4	12.7	143	1401	27.8	-40.1			4220.2	970679
8-29-12	201P	86	30.3	887	48.6	1.8	11.5	39.3	12.4	128	1392	31.2	-40.2			4346.5	986721
9-3-12	211P	90	30.1	814	50.5	1.5	9.6	40.1	12.8	144	1389	28.1	-39.8			4527.3	986898
9-18-12	840	65	30.2	877	52.0	1.2	8.6	39.8	12.3	129	1366	29.6	-40.0			4676.5	993900 scan disk
9-14-12	200	66	30.3	949	52.5	1.2	7.4	40.0	13.7	131	1347	33.3	-45.0			4823.5	1001673 EXC 1000
9-20-12	1100	70	30.2	1021	52.0	1.3	12.2	39.6	14.1	134	1443	35.1	-45.0			4853.5	1003373 -45
9-24-12	120	64	30.4	1026	50.0	1.5	11.2	38.4	14.3	136	1305	35.5	-45.0			4986.2	1010849
10-3-12	130	64	30.2	1051	47.4	1.3	15.2	37.7	14.5	138	1424	36.9	-45.0			5082.2	1016661
10-8-12	1140	55	30.5	1170	45.3	1.4	17.8	35.6	15.8	133	1166	40.8	-45.0			5214.3	1024964
10-8-12	1255	58	30.5	1064	48.3	1.6	14.6	36.5	14.3	135	1012	35.8	-45.1			5415.3	1038282
10-18-12	1000P	60	30.4	1053	49.9	1.5	10.2	37.5	14.5	128			-45.0			5582.3	1042048
10-22-12	1000	72	30.2	815	50.3	1.7	10.7	38.3	14.3	130	1175	35.8	-45.0			5746.5	981
11-1-12	1005	55	30.2	766	49.5	1.7	11.5	38.3	14.2	124	1437	36.0	-45.0			5986.5	193409 scan disk
11-8-12	100P	58	30.4	788	50.0	1.9	12.1	37.0	14.3	128	1386	36.4	-45.0			6108.5	27800
11-14-12	2100	52	30.7	760	50.3	1.7	11.9	37.2		125	1301	36.5	-44.98			6304.5	34550.6
11-19-12	140	58	30.6	772	51.1	1.5	10.3	38.1	14.3	129	1444	36.0	-44.9			6423.1	39541
11-27-12	1115	36	30.5	756	48.6	1.0	13.0	37.4	14.4	126	1324	36.2	-44.9			6613.1	47555
12-4-12	840	56	30.3	783	47.6	1.3	15.0	36.2	14.7	122	1321	36.3	-45.0			6778.1	54514
12-5-12	900																
12-10-12	1045	30	30.6	745	47.4	1.9	16.3	34.4	14.6	114	1269	36.5	-45.1			6924.1	5394
12-17-12	Flare Blower Blown UP																
12-20-12	940	35	30.4	1111	44.4	2.3	17.6	30.1	12.6	91	1142	27.5	-45.0			7142	77073
12-27-12	12130	34	30.2	1082	47.0	2.3	16.1	34.6	43.1	98	1344	28.2	-42			7307.1	17043 W-REC-2
1-3-13	1140	26	30.3	956	43.1	2.6	18.4	34.1	42.2	97	1434	27.8	-42			7473.1	26728
1-10-13	150P	45	30.2	937	48.4	1.9	17.5	35.5	12.8	98	1442	27.4	-40.9			7644.3	36980
1-17-13	1215	36	30.3	833	47.6	1.9	15.8	34.8	12.6	91	1291	27.6	-40.8			7810.4	46443
1-24-13	220	22	30.3	940	47.6	1.4	16.1	35.4	12.6	96	1272	28.2	-40.9			7932.5	55179
1-28-13	1215	64	30.0	941	48.4	1.5	13.4	36.8	12.8	105	1384	28.7	-40.9			8074.5	61525
2-4-13	1220	46	30.0	855	50.0	1.5	12.7	35.9	12.7	99	1266	29.2	-40.9			8243.1	69128

8-1-12 scan disk

11-19-12 Took 215-500ppm
Flare

8-24-12 Tie in at well 16 Old Header.

8-22-12

Tie in for mw-81

8-29-12

Tie in wells Coleman (210P started Flare after down)

8-31-12

Decommission well Coleman

9-5-12

Reed crossing Coleman

9-10-12

Tie in at well 16

9-13-12

END VAC -45 small open tanks 10-1512 Flow comp

12-20-12
DEC VAC -42

1-3-13 DEC VAC
-41

9-18-12 Coleman Raise 6" riser

9-19-12 Coleman Tie in 8"

9-20-12 Coleman Tie in 8"

9-27-12 Coleman Tie in Well

10-3-12 Flow Meter Bnd Flashing

2000

System VAC	Blower Hours	Totalizer
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
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94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

Date	Time	Amb. Temp	Barometric Pressure	Total Flow	%CH4	%O2	%Balance	%CO2	Inlet Vac.	Gas Temp	Flame Temp.	Blower Amps	Flame Arrestor Inlet	Flame Arrestor Outlet	Flame Arrestor Inlet	Flame Arrestor Outlet	Comments
2-13-13	110P	51	30.2	956	47.7	2.3	14.9	35.1	-40.8	103	1389	29.0	-40.9	8459.5	90610	00	
2-15-13	230P	41	30.2	931	45.6	2.5	18.0	34.0	-41.0	96	1358	28.6	-41.0	8509.1	93407	00	
2-18-13	940P	32	30.1	967	41.8	3.1	21.0	34.1	-41.0	88	1261	28.9	-41.0	8599.4	18730	00	
2-20-13	200P	30	30.4	1194	46.8	2.6	17.3	34.3	-36.1	87	1348	25.4	-34.9	8628.3	100853	00	H2S - 200 PPM 1-S
2-22-13	1200	36	29.9	1257	47.8	2.6	15.4	34.2	-38.8	89	1462	26.3	-34.8	8674.3	104146	00	
3-1-13	820	32	30.0	1159	46.9	2.06	16.3	34.3	-36.6	84	1042	26.0	-35.0	8838.6	115838	00	SCAN disk
3-14-13	200P	36	30.3	1160	54.1	1.4	6.9	35.7	-42.5	92	1150	25.1	-34.9	9133.0	136266	00	
3-22-13	906A	29	30.2	1062	53.2	1.0	8.5	37.3	-42.2	91	1431	24.6	-35.1	9389.4	147344	00	
3-26-13	714P	28	30.1	997	48.9	1.3	12.9	36.0	-41.9	83	1297	25.0	-35.0	9405.2	153195	00	H2S 400 PPM
4-3-13	240	50	30.3	1001	51.7	1.3	9.9	37.1	-42.4	98	1398	25.3	-35.0	9601.2	164561	00	SCAN disk
4-8-13	240	70	30.0	1113	59.1	1.9	13.4	35.6	-42.7	109	101	25.9	-35.0	9721.1	182123	00	
4-18-13	320	68	30.0	1453	50.8	2.7	11.6	35.0	-43.1	90	1307	26.2	-35.0	9882.4	188658	00	
4-23-13	200P	56	30.0	1283	47.2	2.8	16.2	33.9	-42.5	95	1283	24.6	-35.2	10000.4	193077	00	
5-1-13	230P	51	30.0	1187	49.1	1.7	12.7	36.6	-42.3	113	1388	24.0	-35.0	10193.1	207026	00	SCAN disk
5-6-13	300P	72	30.0	1184	51.5	1.4	10.1	37.0	-42.3	101	1827	24.3	-35.0	10818.5	215409	00	
5-13-13	225P	70	30.2	1180	51.8	1.0	8.6	38.6	-42.3	110	1389	23.9	-35.0	10780.2	227129	00	
5-20-13	350P	86	30.1	1336	50.3	1.1	12.1	36.5	-42.7	120	1455	25.5	-35.1	10639.1	238263	00	
5-22-13	25P	76	29.9	1202	52.3	1.0	9.8	37.5	-42.4	102	1421	24.7	-35.0	10676.2	241237	00	
5-31-13	2:38	78	29.9	1256	54.7	0.9	6.6	37.8	-42.5	108	1265	25.8	-35.0	10833	252125	00	
6-5-13	2:35	81	29.9	1296	52.4	0.7	9.8	37.1	-42.4	113	1427	24.7	-34.9	10953	261015	00	changed disk
6-13-13	1058	72	29.9	1392	52.6	0.8	7.4	39.2	-42.7	107	1262	25.3	-35.1	11133	28000	00	changed Yokogawa
6-28-13	0856	81	29.7	1783	51.2	1.0	7.9	39.9	-43.3	135	1394	30.1	-45.2	11180	32500	00	
7-3-13	1300	80	29.8	1462	50.4	.8	10.6	38.2	-43.2	119	1453	27.7	-40.1	11519.8	33524	00	
7-12-13	1125	77	29.9	1512	46.7	1.0	14.1	38.2	-43.1	127	1312	28.4	-39.9	11731	51894	00	
7-19-13	0945	93	29.8	1271	47.6	1.7	14.2	36.5	-42.4	128	1457	25.3	-39.9	11892	63659	00	
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4-18-17 Restarted after
New bearing close fan
new shaft

5.7-13 Shot Power AP Tracer Ring & A

5-17-15 Shut down for Blower p.p.e
Replacement @ 7:20 AM

5.26 Maint. work field

6.27.13 - Inlet VAC increased

-35in - -45in

Date	Time	Baro	CH4	CO2	O2	BAL	Sctm	VAC	Gas Temp	Fir Temp	Amps	Blwr Hours	Totalizer	Comments
7.3.13	1300	29.8	50.4	39.2	.8	10.6	1462	+3.2/-40.1	119°	1453	22.7	11519	33524	
7.12.13	1125	29.9	46.7	38.2	1.0	14.1	1512	+3.1/-39.9	127°	1312	28.4	11731	51894	
7.17.13	0945	29.8	47.6	36.5	1.7	14.2	1271	+2.4/-39.9	128°	1457	25.3	11892	63659	
7.22.13	1155	29.8	50.6	37.6	1.6	11.4	1220	+2.1/-39.9	126°	1431	24.9	11966	61124	
7.30.13	1000	30.0	51.3	37.7	1.3	9.8	1001	+1.9/-39.9	118°	1449	23.0	12154	81833	Grass
8.2.13	1040	30.0					1004	+1.398	122°	1446	23.2	12369	93944	
8.8.13	1410	29.9	45.1	33.2	3.8	18.0	947	+1.7/-39.8	123°	1431	22.6	12373	94148	Several wells off line
8.13.13	0955	29.9	45.1	32.4	3.8	18.6	930	+1.5/-39.8	119°	1455	22.3	12488	100605	A: 1 ear
8.21.13	1125	29.8	44.3	31.9	4.2	19.6	922	+1.5/-39.8	126°	1510	22.2	12679	111324	" " +4/+3
8.28.13	1025	29.7	44.9	33.4	3.7	18.0	975	+1.5/-39.8	128°	1497	22.7	12844	120618	
9.4.13	1400	29.6	53.9	38.4	1.0	6.7	774	+1.1/-39.8	129°	1336	20.8	13003	129551	Grass
9.9.13	1226	29.5	54.3	39.1	1.0	5.7	970	+1.4/-45	138°	1416	23.0	13090	134404	
9.16.13	1055	30.0	53.4	37.6	1.2	7.9	809	+1.4/-45	124°	1283	22.3	13256	143772	
9.24.13	1110	30.0	53.8	38.1	1.2	7.5	830	+1.1/-45	126°	1312	22.5	13448	154588	+4 - +3
9.30.13	1215	30.0	55.5	39.0	1.5	5.0	970	+1.5/-45	129°	1461	23.6	13593	162753	+4 - +3; 100-50
10.11.13	1142	29.9	55.8	39.1	1.6	4.5	928	+1.4/-45	126°	1300	23.3	13857	177570	Grass
10.15.13	1220	30.0	55.6	39.5	1.5	4.5	928	+1.4/-45	117°	1288	23.0	13964	183009	
10.21.13	1300	29.9	57.6	39.9	1.5	2.2	911	+1.5/-40	102°	1429	21.9	.08	187716	
10.30.13	1020	30.0	55.1	38.8	1.5	5.6	922	+1.3/-44	114°	1380	21.1	.20	199256	New PIC etc installed.
11.6.13	0957	30.0	55.3	40.0	.5	4.3	1019	+1.5/-46.8	110°	1300	23.9	163.0	208630	oil
11.14.13	1348	30.0	56.5	39.8	.5	3.5	991	+1.4/-46.8	109°	1291	23.7	359.	219649	
11.22.13	1030	30/37°	54.9	38.9	1.7	5.5	930	+1.4/-47.0	97°	1315	23.0	548	230263	
11.25.13	1140	29.7	56.1	37.3	.9	5.7	973	+1.5/-44.7	107°	1492	23.7	601	234371	
12.4.13	1043	30.0	48.3	39.6	.6	11.5	1517	+3.1/-44.7	112°	1228	31.0	816	258396	Grass
12.9.13	1055	29.9	49.2	37.5	.7	10.6	1338	+2.4/-46.9	99°	1394	28.9	936	269243	
12.17.13	1140	30.0	49.7	38.2	1.0	11.2	1336	+2.4/-46.9	104°	1342	29.3	1128	290843	32°
12.24.13	1120	30.3	50.7	39.4	.6	9.4	1306	+2.5/-46.9	98°	1403	28.4	1296	307706	7°

10.29.13 0800 - 1330 LFG

8.31.13 - Run out of nitrogen in middle of night.
9.5.13 @ 1000 Fire down for new Sump install.
9.6.13 @ 1732 Fire back on line.

10.15.13 @ 1320 Fire shutdown for Drain Valve (Randy) wires landed on T14 191

2014

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Cottonwood Hills Maintenance Log - Utility Flare

Date	Component	Maintenance/Activity Performed	Performed By
1.13.15	Blower	Bearings Greased	MM
2.26.15	Blower	" "	MM
3.3.15	Flare Header	Pulled / Inspected / Cleared. ON @ 125.7	MM
3.17.15	Blower	Greased	MM
4.9.15	"	"	MM
5.8.15	"	"	MM
6.2.15	8'14" am	6.25 pm	2C
6.8.15	Blower	Greased	MM
6.9.15	Flare 0733	Install of new Header & Blower on 2237	MM/SS/2C
6.10.15	Flare 0756	Control wiring & Consistent again install - on 2245	MM/SS
6.11.15	Flare off 1327	VFD/PLC comm wiring & Programming	MM/SS
7.2.15	Blower Motor	Bearings Greased	MM
7.22.15	Flare off @ 1345	Blower coupler failed	MM
7.23.15	Flare	Blower Coupler Replaced / Flare back on @ 1406	MM
7.7.15	Flare	Out of Nitrogen on @ 1008 9.8.15	MM
7.9.15	Flare / Sump	Sump pump failed / Replaced Pump on @ 1350	MM
7.25.15	Flare @ 1100pm	Nitrogen out on @ 1145am 9.26.15	MM
7.26.15	Blower	Oil added to bearings	MM
7.30.15	Flare	Replaced Nitrogen	MM
10.21.15	Blower / Motor	Motor Greased / Bearings oiled	MM
10.28.15	Flare	Nitrogen changed	MM
11.2.15	Flare	Installed New Yorkogen & Relay Cover for FCR140	MM
12.2.15	Flare / Sump	FM pulled & cleaned. Wishing pulling out Sump wires	MM
12.3.15	Sump / Flare	New Control Panel & Pump installed. Flare back on @ 1353	MM
12.7.15	Blower Motor / Blower	Greased / Oil added	MM
12.14.15	Flare	Down @ 2300 hrs. Panel Swage Up	MM
1.3.16	Flare	Down @ 2300 Utility lost Log @ Up @ 1600 1/4/16	MM
1.16.16	Flare	Back online @ 1320 / Wishing pulled down 480v lines	MM

* Field Copy * Rained on

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**Cottonwood Hills Recycling and Disposal Facility
Control Equipment
Inspection, Maintenance and Repair Log**

Date	Component	Activity Performed	Initials
1.13.15	Blower	Bearings Greased / Inspection	MM
2.26.15	Blower	Bearings Greased	MM
3.3.15	Flame Arrestor	Pulled / Inspected & cleaned Flame Arrestor	MM
3.12.15	Blower	Greased	MM
4.9.15	"	"	MM
5.8.15	"	"	MM
6.2.15	Flare	Header moved to pour concrete pad for new Blower	ZC
6.8.15	Blower	Greased	MM
6.9.15	Flare off #0733	Install of NEW HEADER & Blower on @ 2237	ZC/SS/MM
6.10.15	Flare off #0956	Control wiring & condensate drain install on @ 2245	MM/SS
6.11.15	Flare/VFD/PLC	Communication wiring / Programming	SS/MM
7.2.15	Blower Motor	Bearings Greased	MM
7.22.15	Flare off #1345	Blower coupler failed / order new one overnight	MM
7.23.15	Flare	Blower coupler Replaced / on @ 1406	MM
9.7.15	Nitrogen	Nitrogen bottle replaced	MM
9.9.15	Sump	Sump pump failed / Replaced Pump	MM
9.25.15	Nitrogen	Nitrogen tank Replaced / Inspection	MM
9.26.15	Blower	Oil added	MM
9.30.15	Nitrogen	Nitrogen tank Replaced	MM

Note: Completion of this form satisfies the requirements of the December 23, 2014 CAAPP permit Conditions 4.1.2.c.ii.D.1.4, 4.1.2.d.ii.B.11.3, and 4.1.4.a.ii.B.1.4. These conditions require documentation of inspections and maintenance performed on the control

2015/2016

Cottonwood Hills Recycling and Disposal Facility
Control Equipment
Inspection, Maintenance and Repair Log

2016

Date	Component	Activity Performed	Initials
10.21.15	Blower/Motor	MOTOR GREASED / Bearings oiled	MM
10.28.15	Nitrogen	TANK CHANGED / Inspection INSPECTION	MM
11.2.15	Flare CR	Installed NEW Yokogawa chart recorder & Relay CARRIER for CR140	MM
12.2.15	Flare Sump	Inspected & cleaned Flowmeter. WISSEHA ELECTRIC RUNNING WIRE FOR NEW SUMP CONTROL PANEL.	MM
12.3.15	Sump	NEW control panel & Pump installed in CONDENSATE Pump. Flare on @ 1353	MM
12.7.15	Blower/Motor	Greased GREASED / Oil Added	MM
1.3.16	Flare	Down @ 2325 utility lost Leg(B) / Up @ 1608 1.4.16	MM
1.6.16	Flare	Back online @ 1320 / WISSEHA pulled new 480V 3PH lines to Flare	MM
1.18.16	Flow meter	Flow @ 6005cfm / Found debris on flow meter tip / cleaned Flow @ 14205cfm	MM
1.22.16	Nitrogen	Down @ 0459 / Replaced Nitrogen / Up @ 1228	MM
1.22.16	Blower	GREASED MOTOR BEARINGS / Added bearing oil	MM
2.1.16	Flare	Inspect Flame Arrester off @ 1119 / ON @ 1238	MM
2.1.16	Alarm Agent	Test call & Triggered Alarms for testing	MM
2.22.16	Blower/Motor	BEARINGS GREASED / Oil Added	MM
3.15.16	Flare	Flame blew out due to high winds / Up @ 2350 (Relay failure)	MM
3.17.16	Motor	GREASED BEARINGS	MM
4.4.16	Flow meter/Blower	Pulled / Inspected / cleaned flow meter. Added bearing oil	MM
4.15.16	Flare	Down for Road crossing install.	MM
4.15.16	Motor	BEARINGS GREASED.	MM

Note: Completion of this form satisfies the requirements of the December 23, 2014 CAAPP permit Conditions 4.1.2.c.ii.D.I.4, 4.1.2.d.ii.B.II.3, and 4.1.4.a.ii.B.I.4. These conditions require documentation of inspections and maintenance performed on the control

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2016

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Note: Completion of this form satisfies the requirements of the December 23, 2014 CAAPP permit Conditions 4.1.2.c.ii.D.1.4, 4.1.2.d.ii.B.II.3, and 4.1.4.a.ii.B.1.4. These conditions require documentation of inspections and maintenance performed on the control